UNITED STATES PATENT AND TRADEMARK OFFICE

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10/662,017	09/11/2003	Jeremy Harris	SUN-P9556	8584

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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _02 October 2006_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-39_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-39_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1   This communication is in response to applicant's RCE, which was filed on May

25, 2007.

2   Amendments and arguments to pending claims 1-39 have been entered and

made of record in the application of Harris "System and method for detecting the

connection state of a network cable connector" filed on September 11, 2003.

Claims 1-3, 5, 8, 10, 14-16, 20, 21, 24, 25, 32 and 34-38 are amended.

Claims 4, 6, 7, 9, 11-13, 17-19, 22, 23, 26-31, 33 and 39 are the same as

originally filed.

Claims 1-39 are pending.

Response to Arguments

3   Applicant's amendments and arguments with respected to the pending claims 1-

23, have been fully considered and applicant's amendments and arguments are

persuasive, which put the pending claims 1-23 in a condition for allowance.

4   Applicant's arguments with respect to pending claims 24-39 have been

considered but are moot in view of the new ground(s) of rejection.

Rejections - 35 USC § 103

5   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
>
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
>
> are such that the subject matter as a whole would have been obvious at the time the invention was made to
>
> a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
>
> negatived by the manner in which the invention was made.

6   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
        obviousness or nonobviousness.

7   Claims 24, 31 35 and 36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US Patent of Kim (6,975,312 B2) in view of Rand et al., (6,459,374

B1).

8   As to claim 24, Kim discloses a information technology (IT) network cable

connector (Col. 1, lines 40-43) comprising a connection state of the (IT) network cable

connector to generate a connection state change signal, and the processor defined to

respond to generation of the connection state change signal by transmitting connection

state information over a communication network to indicate a connection state of said

(IT) network cable connector (Col. 1, lines 49-59 Col. 2, lines 3-13, 39-57).

However, Kim does not expressly disclose a sensor that senses the connection

state and being coupled to the processor.

Rand et al., discloses a network cable connector (Col. 1, lines 40-43) comprising

a sensor that senses a connection state of the connector and state change signal (Col.

3, lines 17-25, 29-54, 60-64; Col. 4, lines 1-11).

One of ordinary skill in the art, at the time of the invention, would have been

motivated to combine the two, in order to have a sensor that senses connection state

information to a connection state monitoring utility within the IT network, because both

disclosures are directed to solving similar problem, which is detecting a connection sate

of network cable.

9   As to claim 31, Rand et al., discloses wherein said contact sensor includes a

switch selected from the group that includes mechanical, electrical, resistive, optical and

capacitive (Col. 4, line 2; Item 40 of figure 3).

10   As to claim 35, Rand et al., discloses wherein said network cable connector is a

plug (Col. 3, lines 60-64; Items 12 and 21 of figure 1).

11   As to claim 36, Rand et al., discloses wherein said network cable connector is a

cable socket (Col. 3, lines 60-64; Items 31 and 52 of figure 1).

12   Claims 25-30, 32 and 37-39 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US Patent of Kim (6,975,312 B2) in view of Rand et al., (6,459,374

B1) and further in view of U.S. Patent of Billiard (6,842,114 B2).

13   As to claim 25, the combination of Kim and Rand et al., does not expressly

disclose wherein said network cable connector further comprises a memory.

        Billiard discloses a network cable connector that changes a state based on the

detection of connection and/or disconnection of the cable, which comprises a processor

and a memory (Col. 12, lines Col. 14, lines 21-30; Item 8 of figure 6).

        One of ordinary skill in the art at the time of the invention was made would have

been motivated to combine, because Billard discloses the memory is to store operating

programs and other necessities to run the program (Col. 14, lines 25-30) and further,

one skilled in the art knows the a processor would have some sort of a memory in order

to function and having.

14   As to claim 26, the connector and method of claim 24, further, Billiard discloses a

transmission control protocol (Col. 14, lines 1-20), however, the combination of Rand et

al., and Billiard does not expressly disclose the communication protocol selected from

the group that includes IPv6 (Internet Protocol Version 6), TCP (Transmission Control

Protocol), finger, and SNMP (Simple Network Management Protocol).

It would have been obvious, to one of ordinary skill in the art, at the time of the

invention, to have the communication protocol selected from the group that includes

IPv6 (Internet Protocol Version 6), TCP (Transmission Control Protocol), finger, and

SNMP (Simple Network Management Protocol), because the protocols are well known

in the art and widely used and one skilled in the art may choose a particular or a

combination of different communication protocols as desired.

15   As to claim 27, the combination of Kim, Rand et al., and Billiard disclose wherein

said sensor is a contact sensor (Col. 3, lines 17-25 of Rand et al.).

16   As to claim 28, Billiard discloses wherein said processor operates in response to

an interrogation signal to ascertain connection state information (Col. 14, lines 57-67;

Col. 15, lines 1-28).

17   As to claim 29, Billiard discloses wherein said processor operates in response to

said connection state change signal (Col. 2, lines 48-54).

18   As to claim 30, Billiard discloses the combination wherein said connection state

information is transmitted wirelessly to said connection state monitoring utility (Col. 10,

lines 45-50).

19   As to claim 32, the combination of Kim, Rand et al., and Billiard does not

expressly disclose wherein said network cable connector comprises an RJ45 twisted

pair connector.

It would have been obvious, to one of ordinary skill in the art, at the time of the

invention, to have a cable connector comprises an RJ45 twisted pair connector,

because one skilled in the art may use any available network connector cable, which

includes RJ45 twisted pair. RJ45cable is well known in the network connection cable art

and widely used.

20   As to claim 37, Billiard discloses wherein said network cable connector is a

power connector (Col. 4, lines 55-67).

21   As to claim 38, Billiard discloses detecting, generating and communicating

information related to power status, fuse status, carrier signal status and temperature

(Col. 9, lines 9-26; Col. 13, lines 18-27).

22   As to claim 39, Rand et al., discloses wherein electrical power for detecting said

network cable disconnection is obtained from the network (Col. 3, lines 48-54).

23   Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable

over US Patent of Kim (6,975,312 B2) in view of Rand et al., (6,459,374 B1) and further

in view of Billiard (6,842,114 B2) and further in view of US patent of Laor (6,002,331).

24   As to claim 33, the combination of Kim, Rand et al., and Billiard does not

expressly disclose wherein a unique identification is mapped to a memory of said

network cable connector.

Laor discloses a unique identification is being mapped to a memory of a network

cable connector (Col. 6, lines 51-62).

It would have been obvious, to one of ordinary skill in the art, at the time of the

invention, to have a unique identification is being mapped to a memory of a network

cable connector, so that it would be desirable to identify different cable connectors

connection status at various point in time as to facilitate proper diagnoses in case of a

connection failure.

25   As to claim 34, Laor discloses memory records a cable connector information

and reading the network cable connector status (Col. 5, lines 39-60).

Allowable Subject Matter

26   Claims 1-23 are allowed as evident by applicant's amendments and arguments.

27   The following is an examiner's statement of reasons for allowance: The prior arts

of record fail to disclose, teach or suggest an event detection and transmission system

limitation "a method for detecting an information technology (IT) network cable

disconnection, said method comprising: detecting a change of connection state of a

network cable connector using a sensor that resides in said network cable connector,

wherein the network cable connector is defined to enable connection of an IT network

cable to an IT network connected device such that IT network signals can be

transmitted between the IT network connected device and the IT network cable through

the network cable connector; transmitting a change of connection state signal from the

sensor to a processor within the network cable connector; operating the processor

within the network cable connector to generate connection state information from the

change of connection state signal information; and operating the processor within the

network cable connector to communicate communicating said connection state

information to a connection state monitoring utility within the IT network."

28   Also "a method for detecting an information technology (IT) network cable

connection state, said method comprising: detecting a state change of a network cable

connector within an IT network using a contact sensor that resides in said network cable

connector; transmitting a change of connection state signal from the sensor to a

processor within the network cable connector; operating the processor within the

network cable connector to generate generating connection state information from the

change of connection state signal; receiving an interrogation signal at the processor

within the network cable connector from a connection state monitoring utility within the

IT network; and operating the processor within the network cable connector to

communicate said connection state information from the network cable connector

through the IT network to said connection monitoring utility using a network

communication protocol in response to receiving the interrogation signal."

Conclusion

29   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sisay Yacob whose telephone number is (571) 272-

8562. The examiner can normally be reached on Monday through Friday 8:00 AM -

4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jeffery A. Hofsass can be reached on (571) 272-2981. The fax phone

number for the organization where this application or proceeding is assigned is 571-
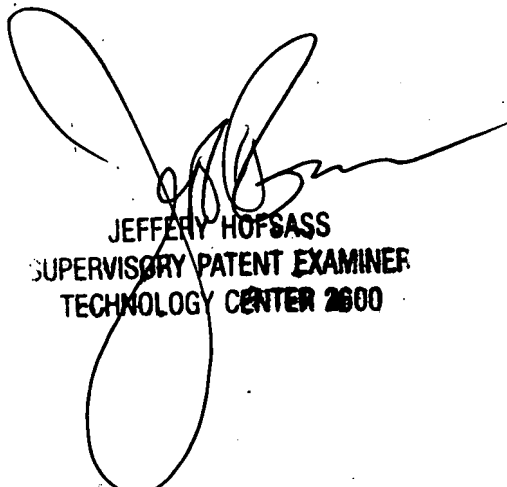
273-8300.

30   Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sisay Yacob

6/18/2007

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